

## REMARKS

United States Serial No. 10/584,869 was filed on April 20, 2007. The Office mailed an Office Action on May 14, 2008. Applicants respectfully traverse the rejection of claims 1-20 for the reasons set forth below. Applicants respectfully request the issuance of a formal Notice of Allowance for claims 1-20.

### Claim Amendments

Claims 9, 10 and 20 have been amended. Support for the amendments to claims 9 and 10 can be found in claims 6 and 8, and in the Description at page 6, lines 1-6 and page 7, lines 4-5 and 24-25. Support for the amendments to claim 20 can be found in claims 7 and 9, and in the Description at page 6, lines 14-23 and page 7, lines 4-5 and 24-25.

### 35 U.S.C. §§ 112 & 101

Claims 9, 10 and 20 have been rejected under 35 U.S.C. § 112, second paragraph and § 101. It is alleged that each of these claims do not set forth any steps involved in the respective method/process, and it is therefore unclear what method/process Applicants are intending to encompass. It is further alleged that the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process.

Applicants respectfully traverse this rejection. Claims 9 and 10 depend from claim 8, which in turn depends from claim 6. The method steps at issue are included in claim 6. Claim 20 depends from claim 19, which in turn depends from claim 7. The method steps at issue are included in claim 7.

However, claims 9, 10 and 20 have been amended in order to clarify the method/process which they intend to encompass, and to set forth the steps involved in the processes. Support for the amendments is cited above. The clarifying amendments do not alter or narrow the scope of the claims. *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722 (2002). Therefore, Applicants respectfully request that the § 112, second paragraph, and § 101 rejections of claims 9, 10 and 20 be withdrawn.

### 35 U.S.C. § 102

Claims 1-4, 6-12, 15 and 17-20 have been rejected under 35 U.S.C. § 102(b) as being anticipated by Mills, et al. (US 2002/0161071) ("Mills"). With regard to claims 1-4, 11-12 and 15, it is alleged that Mills teaches a cementitious composition which comprises, in pertinent part, 25 to 95% calcium aluminate and 0 to 10% lime. It is further alleged that "[t]aking into account the calcium oxide (lime) content of the calcium aluminate . . . , the overall lime content exceeds 13%, and can exceed 40% according to the disclosed amounts of the ingredients in the composition."

Applicants respectfully submit that the Office Action's characterization of Mills is technically incorrect. While it is true that lime (e.g., CaO) and calcium aluminate (e.g.,  $\text{Al}_2\text{CaO}_4$ ) molecules both contain calcium and oxygen atoms, it is not correct that calcium aluminate "contains" lime. Lime and calcium aluminate are distinct compounds which react differently. The lime "content" of calcium aluminate is not available to react as lime, as it remains a part of the calcium aluminate. Therefore, the presence of 0 to 10% lime and calcium aluminate in the composition of Mills does not anticipate the at least 13% by weight of lime present in the water absorbing composition (i) of present claim 1. Applicants therefore respectfully request withdrawal of the § 102(b) rejection of claim 1.

Claims 2-4, 6-12, 15 and 17-20 depend, either directly or indirectly, from claim 1. MPEP § 2131 states that "[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631 . . . (Fed. Cir. 1987)." MPEP

at 2100-67. Independent claim 1 necessarily contains elements which are present in claims which depend from claim 1. Therefore, Applicants respectfully submit that the dependent claims are not anticipated by Mills, for the reasons discussed above, and respectfully request withdrawal of the § 102(b) rejection of claims 2-4, 6-12, 15 and 17-20.

### 35 U.S.C. § 103

Claims 5, 13-14 and 16 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Mills, et al. (US 2002/0161071) in view of either Galer, et al. (US 4,350,533) ("Galer") or Matsuura, et al. (JP 2001-163650) ("Matsuura"). In light of the arguments set forth below, Applicants respectfully traverse.

It is alleged that Mills teaches a cementitious composition which comprises, in pertinent part, 25 to 95% calcium aluminate and 0 to 10% lime. It is further alleged that "[t]aking into account the calcium oxide (lime) content of the calcium aluminate . . . , the overall lime content exceeds 13%, and can exceed 40% according to the disclosed amounts of the ingredients in the composition."

As discussed above, Applicants respectfully submit that the Office Action's characterization of Mills is technically incorrect. While it is true that lime (e.g., CaO) and calcium aluminate (e.g.,  $\text{Al}_2\text{CaO}_4$ ) molecules both contain calcium and oxygen atoms, it is not correct that calcium aluminate "contains" lime. Lime and calcium aluminate are distinct compounds which react differently. The lime "content" of calcium aluminate is not available to react as lime, as it remains a part of the calcium aluminate. Therefore, the presence of 0 to 10% lime and calcium aluminate in the composition of Mills does not render obvious the at least 13% by weight of lime present in the water absorbing composition (i) of present claim 1, particularly noting that Mills teaches that lime may be entirely absent (0%).

It is admitted in the Office Action that "Mills et al. does not teach that the water absorbing composition contains a stoichiometric surplus of lime." It is alleged that "Galer et al. does teach cementitious compositions comprising extraneous lime (Col. 4, lines 5-25)." It is further alleged that "Mills et al. and Galer et al. are combinable because they are from the same field of endeavor, namely cementitious compositions."

MPEP § 2143.02 states that "[t]he prior art can be modified or combined to reject claims as *prima facie* obvious as long as there is a **reasonable expectation of success**. *In re Merck & Co., Inc.*, 800 F.2d 1091 . . . (Fed. Cir. 1986)." MPEP at 2100-141 (emphasis added). Mills teaches that lime may be added in a range of 0 to 10% by weight of the cementitious composition (i). Thus, Mills teaches against any use of lime in amounts greater than 10% by weight. Furthermore, Galer teaches that the amount of extraneous lime is from 0 to 8.5% (col. 4, line 12), in contrast to the amount of lime recited in the present claim 1 (at least 13%). Therefore, one of skill in the art would not have a reasonable expectation of success in solving the problem solved by the present application by combining Mills with Galer. Further, the combination of Mills and Galer, as described above, fails to provide each and every limitation of the claims, namely the limitation in claim 1 requiring at least 13 weight percent lime.

MPEP § 2143.03 states that "[i]f an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. *In re Fine*, 837 F.2d 1071 . . . (Fed. Cir. 1988)." MPEP at 2100-142. Since claim 1, in light of the arguments set forth above, is not rendered obvious by the applied references, then claims 5, 13-14 and 16, being dependent, either directly or indirectly, from claim 1, are also not rendered obvious. Therefore, and in view of the arguments above, Applicants respectfully request withdrawal of the rejection of claims 5, 13-14 and 16 in view of the combination of Mills and Galer.

It is admitted in the Office Action that "Mills et al. does not teach that the composition contains at least 62 weight % of lime." It is alleged however that "Matsuura et al. does teach a cement quick setting agent that can contain at least 62 weight % of lime when all of the

components of the composition are taken together (Abstract).” It is further alleged that “Mills et al. and Matsuura et al. are combinable because they are from the same field of endeavor, namely cementitious compositions.”

Applicants respectfully traverses. Matsuura teaches a composition which comprises (A) 100 parts by weight of a crystalline  $\text{Na}_2\text{O}-\text{CaO}-\text{Al}_2\text{O}_3$  based composition; (B) 1-30 parts by weight of amorphous alumina or low-crystallinity alumina; (C) 5-200 parts by weight of any inorganic salts selected from alkali aluminate, alkali carbonate, alkali sulfate, lime and gypsum; and (D) 20-100 parts by weight of a fine powder (Abstract). Component A is a crystalline composition, and therefore the part of the composition which is CaO (40-70%) is not available as excess lime over the stoichiometric amount of CaO present in the other crystalline components. Therefore, the only component which may contain lime is component C. Calculating the possible content of lime from this characterization, which Applicant respectfully submits is the characterization which a person of skill in the art would derive from the teaching of Matsuura, shows that lime may be entirely absent, or optionally present in amounts ranging from above 0% to about 62% by weight. Therefore, Matsuura does not teach a composition that that can contain at least 62 weight % lime; Matsuura teaches a composition which can have a maximum of about 62 weight % lime, but equally can have up to about 62% of any of four different alkali materials with a complete absence of lime.

Further, the description of Matsuura shows examples according to the composition of Matsuura which use lime in a range of 0% to about 19% by weight. Therefore, it is not clear that use of lime in a range of about 62% would be effective, since it is a drastic departure from the examples shown in the disclosure. Therefore, there is no suggestion or motivation to use the composition of Matsuura to alter the composition of Mills to use at least 62% by weight lime, which specifically teaches that lime should be present in amount of no more than 10%. The combination of the contrary teachings of Mills and Matsuura to reject the present claims is therefore inappropriate.

Further, MPEP § 2143.02 states that “[t]he prior art can be modified or combined to reject claims as *prima facie* obvious as long as there is a reasonable expectation of success. *In re Merck & Co., Inc.*, 800 F.2d 1091 . . . (Fed. Cir. 1986).” MPEP at 2100-141 (emphasis added). Mills teaches that lime may be absent, or added in a range of up to 10% by weight of the cementitious composition (i). Thus, Mills teaches against any use of lime in amounts greater than 10% by weight. Matsuura also teaches that components other than lime may be present to the exclusion of lime. Therefore, one of skill in the art would not have a reasonable expectation of success in solving the problem solved by the present application by combining Mills with Matsuura by requiring at least 13 weight percent lime (claim 1), at least 25 weight percent lime (claim 3), or at least 62 weight percent lime (claims 13 and 14) in the settable mixture.

MPEP § 2143.03 states that “[i]f an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. *In re Fine*, 837 F.2d 1071 . . . (Fed. Cir. 1988).” MPEP at 2100-142. Since claim 1, in light of the arguments set forth above, is not rendered obvious by the applied references, then claims 5, 13-14 and 16, being dependent, either directly or indirectly, from claim 1, are also not rendered obvious. Therefore, Applicants respectfully request withdrawal of the § 103(a) rejection of claims 1, 5, 13-14 and 16 in view of the combination of Mills and Matsuura.

### **Double Patenting**

Claims 1-3, 6-13 and 17-20 have been provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being allegedly unpatentable over claims 1-8, 10, 14 and 17-20 of copending, commonly owned U.S. Serial No. 10/585,010.

Applicants note that U.S. Serial No. 10/585,010 has been abandoned effective July 3, 2008. Thus, it cannot mature to grant, and a Double Patenting rejection is not appropriate. Applicants respectfully request that the double patenting rejection be withdrawn.

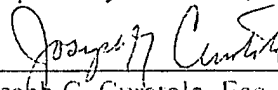
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Applicants: Thomas KOTHE, et al.  
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In view of the above amendments and remarks, Applicants respectfully request the withdrawal of the 35 U.S.C. §§ 112 and 101, 102(b), 103(a), and double patenting rejections of claims 1-20. Applicants respectfully request the issuance of a formal Notice of Allowance for claims 1-20.

Should there be any questions regarding the above amendments or remarks, the undersigned attorney would welcome a telephone call.

Respectfully submitted,



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